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BRIARCLIFF MANOR, NY 10510

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SCHNEE, HAL W	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/560,682	FONTIJN ET AL.	
	Examiner	Art Unit	
	HAL SCHNEE	2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 January 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13,15-29 and 31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13,15-29 and 31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-13, 15-29, and 31 are pending in this application. Claims 1, 21, and 26 are amended by applicant's amendment filed 13 January 2010.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11 December 2009 has been entered.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-13, 15-29, and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claims 1, 21, and 26, they recite ". . . to define a not necessarily contiguous space associated with the partition . . ." (Claim 1, line 11, for example). However, the present claims later recite both (at least) a first partition and a second partition. So the limitation of "the partition" is indefinite because it is unclear which partition or partitions are being modified by the new limitations. There is also a lack of antecedent basis since "the partition" is recited before

a first partition or a second partition are mentioned in the present claims. For the purposes of examination under prior art, the examiner will interpret "the partition" to refer to any partition on the record carrier.

Regarding Claims 2-13, 15-20, 22-25, 27-29, and 31, they are rejected as being dependent on a rejected base claim.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 3, 4, 9, 10, 13, 15, 26, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heo et al. (U.S. Patent 6,901,210, hereinafter referred to as "Heo") in view of Ballantyne (U.S. Patent 6,693,869), further in view of Abboud et al. (U.S. Patent 6,636,958, hereinafter referred to as "Abboud"), further in view of Puri et al. (U.S. Patent 6,260,043, hereinafter referred to as "Puri"), and further in view of Basham et al. (U.S. Patent 5,757,571, hereinafter "Basham").

Regarding Claim 1, Heo teaches a drive device for providing access to a record carrier (fig. 3; col. 4, lines 39-45), said drive device comprising access means for providing at least one of a read access and a write access to at least one predetermined parameter written on a predetermined navigation area (DN) on said record carrier, said at least one predetermined parameter specifying at least one of a logical format and an application format used on said

record carrier (fig. 2; col. 4, lines 25-38—the lead-in area, logical volume area, and UDF file system together constitute a predetermined navigation area. The CD and DVD formats are both logical and application formats);

wherein the record carrier is partitioned into at least a first partition for including first content of a first type and second partition for including second content of a second type so that a first access device accesses the first content and a second access device accesses the second content, the first type being different from the second type (col. 1, line 56 – col. 2, line 5—the record carrier is partitioned into an audio CD partition {or session} and a CD-ROM partition; these are two content types, each of which is accessed by a different access device).

Heo does not teach wherein said access means is arranged to write to said navigation area a location information of data accessed at a rate higher than an access pattern information for sequential data retrieval,

wherein the record carrier is subdivided into fragments and said at least one predetermined parameter comprises a partition descriptor information (PD) for specifying a fragment allocation to define a not necessarily contiguous space associated with the partition,

wherein space is dynamically moved between the first partition and the second partition, and

wherein said access means is further configured to see all files of multiple formats included in the record carrier including recognizing a file having one format on the record carrier without understanding content of the file, and ignoring the file having the one format.

However, Ballantyne teaches an access means arranged to write to said navigation area a location information of data accessed at a rate higher than an access pattern information for

sequential data retrieval (col. 13, lines 26-36 describes placing certain types of files towards the outer portion of the disk. These files, such as the .EXE {executable} files specifically cited, are desired to be accessed at a higher rate than sequential data, such as audio files. Col. 10, lines 10-13 further describes choosing locations for higher transfer rates, and col. 2, lines 43-54 explains the desirability of using a higher data rate for data files than for sequential data retrieval {such as audio data}. Col. 13, lines 57-60 shows writing the location information of these files to the navigation area {pointer table}).

All of these claimed elements were known in Heo and Ballantyne and could have been combined by known methods with no change in their respective functions. It therefore would have been obvious to a person of ordinary skill in the art at the time of invention to combine the writing location information of Ballantyne with the drive device and navigation area of Heo to yield the predictable result of a drive device wherein said access means is arranged to write to said navigation area a location information of data accessed at a rate higher than an access pattern information for sequential data retrieval. One would be motivated to make this combination for the purpose of optimizing data access by placing different types of data in locations on the record carrier with inherently faster or slower data rates.

Heo/Ballantyne does not teach that space is dynamically moved between the first partition and the second partition, wherein the record carrier is subdivided into fragments and said at least one predetermined parameter comprises a partition descriptor information (PD) for specifying a fragment allocation to define a not necessarily contiguous space associated with the partition, and wherein said access means is further configured to see all files of multiple formats

included in the record carrier including recognizing a file having one format on the record carrier without understanding content of the file, and ignoring the file having the one format.

However, Abboud teaches that space is dynamically moved between the first partition and the second partition (col. 7, line 37 – col. 8, line 3—space is dynamically moved between the NOS partition and the float partition).

All of these claimed elements were known in Heo/Ballantyne and Abboud and could have been combined by known methods with no change in their respective functions. It therefore would have been obvious to a person of ordinary skill in the art at the time of invention to combine the dynamic partitioning of Abboud with the drive device and partitions of Heo/Ballantyne to yield the predictable result of a drive device in which space on the record carrier is dynamically moved between the first partition and the second partition. One would be motivated to make this combination to make efficient use of the limited space of the record carrier.

Heo/Ballantyne/Abboud does not teach said access means is further configured to see all files of multiple formats included in the record carrier including recognizing a file having one format on the record carrier without understanding content of the file, and ignoring the file having the one format without making an attempt to interpret the file having the one format, and wherein the record carrier is subdivided into fragments and said at least one predetermined parameter comprises a partition descriptor information (PD) for specifying a fragment allocation to define a not necessarily contiguous space associated with the partition.

However, Puri teaches an access means that is configured to see all files of multiple formats included in the record carrier including recognizing a file having one format on the

record carrier without understanding content of the file, and ignoring the file having the one format without making an attempt to interpret the file having the one format (fig. 4, steps 416 and 418, and fig. 3, step 325; col. 9, lines 13-25—all files are recognized, regardless of the format. In the described flow, in step 416, the filename extension is first checked to determine if the file is understood. If not {i.e. if the extension is not a Wordperfect extension}, in step 418 the Windows Registry is checked to determine the file type. If the file type is registered as a type other than Wordperfect {i.e. the file has one format of multiple formats, the content of which is not understood}, it is ignored; the flow goes to step 325 of fig. 3, which terminates the process and performs no further processing on the file).

All of these claimed elements were known in Heo/Ballantyne/Abboud and Puri and could have been combined by known methods with no change in their respective functions. It therefore would have been obvious to a person of ordinary skill in the art at the time of invention to combine the recognizing and ignoring files of Puri with the access means of Heo/Ballantyne/Abboud to yield the predictable result of said access means being further configured to see all files of multiple formats included in the record carrier including recognizing a file having one format on the record carrier without understanding content of the file, and ignoring the file having the one format without making an attempt to interpret the file having the one format. One would be motivated to make this combination for the purpose of maintaining the recorded file structure while avoiding errors by not attempting to interpret a file of an unknown format.

Heo/Ballantyne/Abboud/Puri does not specifically teach the record carrier is subdivided into fragments and said at least one predetermined parameter comprises a partition descriptor

information (PD) for specifying a fragment allocation to define a not necessarily contiguous space associated with the partition. However, Basham teaches a record carrier that is subdivided into fragments and a predetermined parameter that comprises a partition descriptor information (PD) for specifying a fragment allocation to define a not necessarily contiguous space associated with the partition (col. 3, lines 30-34 describes variable-size partitions composed of segments {i.e. fragments}; col. 3, lines 62-67 explains that the partitions may be composed of non-contiguous fragments. Col. 11, line 57 - col. 12, line 9 describes the parameter used to specify the fragment allocation to partitions).

All of the claimed elements were thus known in Heo/Ballantyne/Abboud/Puri and Basham and could have been combined by known methods with no change in their respective functions. It therefore would have been obvious to a person of ordinary skill in the art at the time of invention to combine the partitions composed of non-contiguous fragments of Basham with the record carrier of Heo/Ballantyne/Abboud/Puri to yield the predictable result of having the record carrier be subdivided into fragments and said at least one predetermined parameter comprises a partition descriptor information (PD) for specifying a fragment allocation to define a not necessarily contiguous space associated with the partition. One would be motivated to make this combination for the purpose of further increasing the flexibility of the storage format (Basham, col. 4, lines 48-55).

Regarding Claim 3, Heo teaches said at least one predetermined parameter comprises a partition descriptor information for specifying at least one of a nature of each partition on said record carrier, a type of each partition on said record carrier, a space associated with each partition on said record carrier, a fragment allocation to each partition on said record carrier, and

specific rules for recording on each partition on said record carrier (col. 4, lines 5-24—the CD session and CD-ROM session constitute different partitions; the parameters specify recording formats such as the DVD/UDF format, which includes specific rules for recording on each partition).

Regarding Claim 4, Heo teaches said access means is configured to provide at least one of a read access and a write access to an application use area provided in said navigation area for storing an application specific information available to at least one of a physical layer, a logical layer and an application layer of said drive device (col. 5, line 61-col. 6, line 4—the DVD Application area in fig. 2 is an application use area in the navigation area, which the device can read for application specific information, such as determining the type of file system; this section describes access through the differentiation signal {physical layer} and DVD application formatter {application layer}).

Regarding Claim 9, Heo teaches said access means is arranged to use said navigation area for reserving space in a program area of said record carrier for specific file systems, allocation classes or applications (fig. 2; col. 4, lines 5-24—the navigation area reserves space for an audio CD application and a DVD application, with different file systems for each application).

Regarding Claim 10, Heo teaches said access means is arranged to use said navigation area for assigning properties or attributes to said reserved space (fig. 2; col. 4, lines 5-24—the file formats applied to the reserved space is a property of the space).

Regarding Claim 13, Heo teaches said access means is arranged to use said navigation area for selecting an application class for an application (col. 5, lines 21-30—the navigation area

is read to determine which application class is to be used to access the data on the disc—CD audio, CD video, CD-ROM, etc.)

Regarding Claim 15, Heo/Ballantyne does not teach said access means is arranged to use a dynamic partitioning for defining areas in said navigation area. However, Abboud teaches said access means is arranged to use a dynamic partitioning for defining areas in said navigation area (col. 7, lines 1-6).

It would have been obvious to a person of ordinary skill in the art at the time of invention to combine the dynamic partitioning of Abboud with the drive device of and access means of Heo/Ballantyne as both are directed towards extending the functionality of drive devices. One would be motivated to make this combination for the purpose of allowing the dynamic adjusting of the partition size to accommodate the variable size of new applications (Abboud, col. 2, lines 43-46).

Regarding Claim 26, Heo teaches a method of reading from or writing to a record carrier (Abstract, lines 1-3), said method comprising the acts of:

providing on said record carrier a predetermined navigation area (fig. 2; col. 4, lines 25-38—the lead-in area, logical volume area, and UDF file system together constitute a predetermined navigation area);

writing on said navigation area at least one predetermined parameter specifying at least one of a logical format and an application format used on said record carrier (fig. 2; col. 4, lines 25-38—the CD and DVD formats are both logical and application formats); and

using said at least one predetermined parameter for at least one of a read access and a write access to said record carrier (col. 5, line 61-col. 6, line 4—the device uses the parameter to

determine which application and data format apply to the record carrier, and then reads and decodes the data) wherein the record carrier is partitioned into at least a first partition for including first content of a first type and second partition for including second content of a second type so that a first access device accesses the first content and a second access device accesses the second content, the first type being different from the second type (col. 1, line 56 – col. 2, line 5—the record carrier is partitioned into an audio CD partition {or session} and a CD-ROM partition; these are two content types, each of which is accessed by a different access device).

Heo does not teach:

presenting an application with the predetermined navigation area for writing desired data in the predetermined navigation area for allowing a device to recognize a file on the record carrier without understanding content of the file, and ignoring the file having the one format;

writing to said navigation area a location information of data accessed at a rate higher than an access pattern information for sequential data retrieval;

wherein the record carrier is subdivided into fragments and said at least one predetermined parameter comprises a partition descriptor information (PD) for specifying a fragment allocation to define a not necessarily contiguous space associated with the partition; and

wherein space is dynamically moved between the first partition and the second partition.

However, Ballantyne teaches writing to said navigation area a location information of data accessed at a rate higher than an access pattern information for sequential data retrieval (col. 13, lines 26-36 describes placing certain types of files towards the outer portion of the disk.

These files, such as the .EXE {executable} files specifically cited, are desired to be accessed at a higher rate than sequential data, such as audio files. Col. 10, lines 10-13 further describes choosing locations for higher transfer rates, and col. 2, lines 43-54 explains the desirability of using a higher data rate for data files than for sequential data retrieval {such as audio data}. Col. 13, lines 57-60 shows writing the location information of these files to the navigation area {pointer table}).

All of these claimed elements were known in Heo and Ballantyne and could have been combined by known methods with no change in their respective functions. It therefore would have been obvious to a person of ordinary skill in the art at the time of invention to combine the writing location information of Ballantyne with the drive device and navigation area of Heo to yield the predictable result of a method that includes writing to said navigation area a location information of data accessed at a rate higher than an access pattern information for sequential data retrieval. One would be motivated to make this combination for the purpose of optimizing data access by placing different types of data in locations on the record carrier with inherently faster or slower data rates.

Heo/Ballantyne does not teach presenting an application with the predetermined navigation area for writing desired data in the predetermined navigation area for allowing a device to recognize a file on the record carrier without understanding content of the file, and ignoring the file having the one format;

wherein the record carrier is subdivided into fragments and said at least one predetermined parameter comprises a partition descriptor information (PD) for specifying a

fragment allocation to define a not necessarily contiguous space associated with the partition; and

that space is dynamically moved between the first partition and the second partition. However, Abboud teaches that space is dynamically moved between the first partition and the second partition (col. 7, line 37 – col. 8, line 3—space is dynamically moved between the NOS partition and the float partition).

All of these claimed elements were known in Heo/Ballantyne and Abboud and could have been combined by known methods with no change in their respective functions. It therefore would have been obvious to a person of ordinary skill in the art at the time of invention to combine the dynamic partitioning of Abboud with the record carrier of Heo/Ballantyne to yield the predictable result of a method in which space on the record carrier is dynamically moved between the first partition and the second partition. One would be motivated to make this combination to make efficient use of the limited space of the record carrier.

Heo/Ballantyne/Abboud does not teach presenting an application with the predetermined navigation area for writing desired data in the predetermined navigation area for allowing a device to recognize a file on the record carrier without understanding content of the file, and ignoring the file having the one format without making an attempt to interpret the file having the one format; and wherein the record carrier is subdivided into fragments and said at least one predetermined parameter comprises a partition descriptor information (PD) for specifying a fragment allocation to define a not necessarily contiguous space associated with the partition.

However, Puri teaches presenting an application with the predetermined navigation area for writing desired data in the predetermined navigation area for allowing a device to recognize a

file on the record carrier without understanding content of the file, and ignoring the file having the one format without making an attempt to interpret the file having the one format (fig. 4, steps 416 and 418, and fig. 3, step 325; col. 9, lines 13-25—all files are recognized, regardless of the format. In the described flow, in step 416, the filename extension is first checked to determine if the file is understood. If not {i.e. if the extension is not a Wordperfect extension}, in step 418 the Windows Registry is checked to determine the file type. If the file type is registered as a type other than Wordperfect {i.e. the file has one format of multiple formats, the content of which is not understood}, it is ignored; the flow goes to step 325 of fig. 3, which terminates the process and performs no further processing on the file).

All of these claimed elements were known in Heo/Ballantyne/Abboud and Puri and could have been combined by known methods with no change in their respective functions. It therefore would have been obvious to a person of ordinary skill in the art at the time of invention to combine the recognizing and ignoring files of Puri with the method of Heo/Ballantyne/Abboud to yield the predictable result of presenting an application with the predetermined navigation area for writing desired data in the predetermined navigation area for allowing a device to recognize a file on the record carrier without understanding content of the file, and ignoring the file having the one format without making an attempt to interpret the file having the one format. One would be motivated to make this combination for the purpose of maintaining the recorded file structure while avoiding errors by not attempting to interpret a file of an unknown format.

Heo/Ballantyne/Abboud/Puri does not specifically teach the record carrier is subdivided into fragments and said at least one predetermined parameter comprises a partition descriptor information (PD) for specifying a fragment allocation to define a not necessarily contiguous

space associated with the partition. However, Basham teaches a record carrier that is subdivided into fragments and a predetermined parameter that comprises a partition descriptor information (PD) for specifying a fragment allocation to define a not necessarily contiguous space associated with the partition (col. 3, lines 30-34 describes variable-size partitions composed of segments {i.e. fragments}; col. 3, lines 62-67 explains that the partitions may be composed of non-contiguous fragments. Col. 11, line 57 - col. 12, line 9 describes the parameter used to specify the fragment allocation to partitions).

All of the claimed elements were thus known in Heo/Ballantyne/Abboud/Puri and Basham and could have been combined by known methods with no change in their respective functions. It therefore would have been obvious to a person of ordinary skill in the art at the time of invention to combine the partitions composed of non-contiguous fragments of Basham with the record carrier of Heo/Ballantyne/Abboud/Puri to yield the predictable result of having the record carrier be subdivided into fragments and said at least one predetermined parameter comprises a partition descriptor information (PD) for specifying a fragment allocation to define a not necessarily contiguous space associated with the partition. One would be motivated to make this combination for the purpose of further increasing the flexibility of the storage format (Basham, col. 4, lines 48-55).

Regarding Claim 28, Heo teaches presenting an application with the predetermined navigation area (col. 4, lines 26-38) and writing information to the navigation area (col. 3, lines 14-25), but Heo/Ballantyne/Abboud does not specifically teach said access means is further configured to present an application with the predetermined navigation area for writing desired

data in the predetermined navigation area for allowing the drive device to recognize the file on the record carrier without understanding the content of the file.

However, Puri teaches an access means is further configured for allowing the drive device to recognize the file on the record carrier without understanding the content of the file (col. 3, lines 12-31—the drive device recognizes all files, whether or not it understands the content of the files).

All of the claimed elements were known in Heo/Ballantyne/Abboud and Puri and could have been combined by known methods with no change in their respective functions. It therefore would have been obvious to a person of ordinary skill in the art at the time of invention to combine the allowing a drive device to recognize a file without understanding its content of Puri with the navigation area and access means of Heo/Ballantyne/Abboud to yield the predictable result of an access means further configured to present an application with the predetermined navigation area for writing desired data in the predetermined navigation area for allowing the drive device to recognize a file on the record carrier without understanding content of the file.

7. Claims 2, 5, 7, 8, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heo (U.S. Patent 6,901,210) in view of Ballantyne (U.S. Patent 6,693,869) in view of Abboud (U.S. Patent 6,636,958) ii view of Puri (U.S. Patent 6,260,043) in view of Basham (U.S. Patent 5,757,571), as applied to Claims 1 and 9, above, and further in view of Acker (U.S. 2002/0181376).

Regarding Claim 2, Heo/Ballantyne/Abboud/Puri/Basham does not teach said at least one predetermined parameter comprises a disc descriptor information for specifying at least one

of an identification of said record carrier, a type of said record carrier, and parameters applying to said record carrier as a whole. However, Acker teaches at least one predetermined parameter comprises a disc descriptor information for specifying at least one of an identification of said record carrier, a type of said record carrier, and parameters applying to said record carrier as a whole (fig. 7; ¶ [0058] ff.—specifically, Disc type ID is a type of the record carrier, and all of the listed parameters apply to the record carrier as a whole).

Both Heo/Ballantyne/Abboud/Puri/Basham and Acker teach parameters on a record carrier. It therefore would have been obvious to a person of ordinary skill in the art at the time of invention to substitute the disc descriptor information of Acker for the parameters of Heo/Ballantyne/Abboud/Puri to yield the predictable result of having the predetermined parameter comprise a disc descriptor for specifying parameters that apply to the disc as a whole.

Regarding Claim 5, Heo/Ballantyne/Abboud/Puri/Basham teaches accessing parameters in the navigation area, as described for Claim 1, above, but does not specifically teach said at least one parameter of said navigation area is accessible by at least one of a logical layer and an application layer of said drive device by using a predetermined access command. However, Acker teaches accessing the navigation area using predetermined access commands (¶ [0040], last 8 lines).

All of the claimed elements were known in Heo/Ballantyne/Abboud/Puri/Basham and Acker and could have been combined by known methods with no change in their respective functions. It therefore would have been obvious to a person of ordinary skill in the art at the time of invention to combine the accessing the navigation area with commands of Acker with the parameter access of Heo/Ballantyne/Abboud/Puri/Basham to yield the predictable result of said

at least one parameter of said navigation area is accessible by at least one of a logical layer and an application layer of said drive device by using a predetermined access command.

Regarding Claim 7, Heo/Ballantyne/Abboud/Puri/Basham does not teach said access means is arranged to use pointers stored in said navigation area for partitioning said record carrier into separate areas. However, Acker teaches pointers uses for partitioning the record carrier into separate areas (¶ [0004], lines 16-27—there is a pointer in the lead-in area {part of the navigation area} which points to the lead-out area, which in turn points to the start of the data for a session; sessions are separate areas on the record carrier. "Following the chain" indicates that these location indicators are pointers).

All of the claimed elements were known in Heo/Ballantyne/Abboud/Puri/Basham and Acker and could have been combined by known methods with no change in their respective functions. It therefore would have been obvious to a person of ordinary skill in the art at the time of invention to combine the pointers of Acker with the navigation area of Heo/Ballantyne/Abboud/Puri/Basham to yield the predictable result of using pointers stored in said navigation area for partitioning said record carrier into separate areas.

Regarding Claim 8, Heo/Ballantyne/Abboud/Puri/Basham does not specifically teach said access means is arranged to use said navigation area for determining the location of a starting address number in the logical address space for said record carrier as a whole or for a specific application. However, Acker teaches said access means is arranged to use said navigation area for determining the location of a starting address number in the logical address space for said record carrier as a whole or for a specific application (¶ [0135]—fig. 15 shows the

starting address numbers for the record carrier as a whole and for the Data Zone, which is the address for a specific application).

All of the claimed elements were known in Heo/Ballantyne/Abboud/Puri/Basham and Acker and could have been combined by known methods with no change in their respective functions. It therefore would have been obvious to a person of ordinary skill in the art at the time of invention to combine the address determination of Acker with the navigation area of Heo/Ballantyne/Abboud/Puri/Basham to yield the predictable result of having the access means arranged to use said navigation area for determining the location of a starting address number in the logical address space for said record carrier as a whole or for a specific application.

Regarding Claim 11, Heo/Ballantyne/Abboud/Puri/Basham teaches said access means is arranged to use said navigation area (DN) for providing room for application specific data (Heo, fig. 2, User Area 23 is for application specific data, as shown in col. 4, lines 58-65), but does not specifically teach that the access means is arranged to use said navigation area for providing pointers into said reserved space. However, Acker teaches said access means is arranged to use said navigation area for providing pointers into said reserved space (¶ [0004], lines 16-27, as for Claim 7, above).

All of the claimed elements were known in Heo/Ballantyne/Abboud/Puri/Basham and Acker and could have been combined by known methods with no change in their respective functions. It therefore would have been obvious to a person of ordinary skill in the art at the time of invention to combine the pointers of Acker with the application specific data area of Heo/Ballantyne/Abboud/Puri/Basham to yield the predictable result of an access means that uses

the navigation area for providing room for application specific data and for providing pointers into said reserved space.

Regarding Claim 12, Heo/Ballantyne/Abboud/Puri/Basham does not teach said access means is arranged to use pointers stored in said navigation area for applying a seeking function. However, Acker teaches said access means is arranged to use pointers for applying a seeking function (¶ [0121]—the search procedure is a seeking function; the use of pointers is shown in ¶ [0004], lines 16-27).

All of the claimed elements were known in Heo/Ballantyne/Abboud/Puri/Basham and Acker and could have been combined by known methods with no change in their respective functions. It therefore would have been obvious to a person of ordinary skill in the art at the time of invention to combine the seeking function of Acker with the navigation area of Heo/Ballantyne/Abboud/Puri/Basham to yield the predictable result of an access means that uses pointers stored in the navigation area for applying a seeking function.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heo (U.S. Patent 6,901,210) in view of Ballantyne (U.S. Patent 6,693,869) in view of Abboud (U.S. Patent 6,636,958) in view of Puri (U.S. Patent 6,260,043) in view of Basham (U.S. Patent 5,757,571), as applied to Claim 1, above, and further in view of Auwens et al. (U.S. 2002/0131767, hereafter "Auwens").

Regarding Claim 6, Heo/Ballantyne/Abboud/Puri/Basham teaches reading and writing information in the navigation area, as described for Claim 1, above, but does not teach said access means is arranged to provide a caching function for caching at least a part of the

information provided on said navigation area. However, Auwens teaches caching control information recorded by a drive device (¶ [0005], lines 16-22—buffering the control information is a caching function).

All of the claimed elements were known in Heo/Ballantyne/Abboud/Puri/Basham and Auwens and could have been combined by known methods with no change in their respective functions. It therefore would have been obvious to a person of ordinary skill in the art at the time of invention to combine caching function of Auwens with the information in the navigation area of Heo/Ballantyne/Abboud/Puri/Basham to yield the predictable result of having the access means arranged to provide a caching function for caching at least a part of the information provided on said navigation area.

9. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heo (U.S. Patent 6,901,210) in view of Ballantyne (U.S. Patent 6,693,869) in view of Abboud (U.S. Patent 6,636,958) in view of Puri (U.S. Patent 6,260,043) in view of Basham (U.S. Patent 5,757,571), as applied to Claim 1, above, and further in view of Senshu (U.S. 2003/0103429).

Regarding Claim 16, Heo/Ballantyne/Abboud/Puri/Basham does not teach said access means is arranged to apply a volume-based rights management to sessions of an information area of said record carrier. However, Senshu teaches said access means is arranged to apply a volume-based rights management to sessions of an information area of said record carrier (¶ [0014] and [0475]).

All of the claimed elements were known in Heo/Ballantyne/Abboud/Puri/Basham and Senshu and could have been combined by known methods with no change in their respective

functions. It therefore would have been obvious to a person of ordinary skill in the art at the time of invention to combine the rights management of Senshu with the access means of Heo/Ballantyne/Abboud/Puri/Basham to yield the predictable result of a device with access means that applies volume-based rights management to sessions of an information area of the record carrier.

Regarding Claim 17, Heo/Ballantyne/Abboud/Puri/Basham does not teach said access means is arranged to apply a volume-based, partition-based or fragment-based defect management to sessions of an information area of said record carrier. However, Senshu teaches said access means is arranged to apply a volume-based, partition-based or fragment-based defect management to sessions of an information area of said record carrier (¶ [0248] and [0250]).

All of the claimed elements were known in Heo/Ballantyne/Abboud/Puri/Basham and Senshu and could have been combined by known methods with no change in their respective functions. It therefore would have been obvious to a person of ordinary skill in the art at the time of invention to combine the defect management of Senshu with the access means of Heo/Ballantyne/Abboud/Puri/Basham to yield the predictable result of a device with an access means that applies defect management to sessions of an information area of the record carrier.

10. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heo (U.S. Patent 6,901,210) in view of Ballantyne (U.S. Patent 6,693,869) in view of Abboud (U.S. Patent 6,636,958) in view of Puri (U.S. Patent 6,260,043) in view of Basham (U.S. Patent 5,757,571), as applied to Claim 1, above, and further in view of Rafanello (U.S. Patent 6,792,437).

Regarding Claim 18, Heo/Ballantyne/Abboud/Puri/Basham does not teach said drive device is a removable drive device for an optical disc. However, Rafanello teaches a drive device that is a removable drive device for an optical disc (col. 1, lines 29-34; also col. 3, lines 60-65).

All of the claimed elements were known in Heo/Ballantyne/Abboud/Puri/Basham and Rafanello and could have been combined by known methods with no change in their respective functions. It therefore would have been obvious to a person of ordinary skill in the art at the time of invention to combine the removable optical drive of Rafanello with the device of Heo/Ballantyne/Abboud/Puri/Basham to yield the predictable result of a drive device that is a removable drive device for an optical disc.

11. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heo (U.S. Patent 6,901,210) in view of Ballantyne (U.S. Patent 6,693,869) in view of Abboud (U.S. Patent 6,636,958) in view of Puri (U.S. Patent 6,260,043) in view of Basham (U.S. Patent 5,757,571), as applied to Claim 1, above, and further in view of Printz et al. (U.S. 2003/0009334, hereafter "Printz").

Regarding Claim 19, Heo/Ballantyne/Abboud/Puri/Basham does not teach said drive device comprises a standard interface for storage devices. However, Printz teaches said drive device comprises a standard interface for storage devices (¶ [0046]—the fixed storage is a drive device; PCMCIA, IDE, and CF are all standard interfaces).

All of the claimed elements were known in Heo/Ballantyne/Abboud/Puri/Basham and Printz and could have been combined by known methods with no change in their respective functions. It therefore would have been obvious to a person of ordinary skill in the art at the time

of invention to combine the standard interface of Printz with the drive device of Heo/Ballantyne/Abboud/Puri/Basham to yield the predictable result of a drive device that comprises a standard interface for storage devices.

Regarding Claim 20, Heo/Ballantyne/Abboud/Puri/Basham does not teach said standard interface is a PCMCIA, Compact Flash, Newcard, or MMCA interface. However, Printz teaches said standard interface is a PCMCIA, Compact Flash, Newcard, or MMCA interface (¶ [0046]).

All of the claimed elements were known in Heo/Ballantyne/Abboud/Puri/Basham and Printz and could have been combined by known methods with no change in their respective functions. It therefore would have been obvious to a person of ordinary skill in the art at the time of invention to combine the standard interface of Printz with the drive device of Heo/Ballantyne/Abboud/Puri/Basham to yield the predictable result of a drive device with a standard interface that is a PCMCIA, Compact Flash, Newcard, or MMCA interface.

12. Claims 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Acker (U.S. 2002/0181376) in view of Heo et al. (U.S. Patent 6,901,210, hereafter "Heo"), further in view of Abboud (U.S. Patent 6,636,958), further in view of Puri (U.S. Patent 6,260,043), and further in view of Basham (U.S. Patent 5,757,57).

Regarding Claim 21, Acker teaches a record carrier for storing data on an information area thereof (Abstract, lines 1-2), wherein said information area comprises a navigation area for storing at least one predetermined parameter specifying at least one of a logical format and an application format used on said record carrier (¶ [0004], lines 16-27—there is a pointer in the lead-in area which points to the lead-out area, which in turn points to the start of the data for a

session; sessions are separate areas on the record carrier. The lead-in area thus comprises a navigation area);

wherein said navigation area includes location information of data accessible at a rate higher than an access pattern information for sequential data retrieval (¶ [0152]-[0154]—the maximum transfer rate for locations is recorded in the navigation area, with some data being accessed at a rate higher than that of sequential data retrieval, such as for audio CD data).

Acker does not teach the record carrier is partitioned into at least a first partition for including first content of a first type and second partition for including second content of a second type so that a first access device accesses the first content and a second access device accesses the second content, the first type being different from the second type,

wherein the record carrier is subdivided into fragments and said at least one predetermined parameter comprises a partition descriptor information (PD) for specifying a fragment allocation to define a not necessarily contiguous space associated with the partition, and

wherein space is dynamically moved between the first partition and the second partition, and wherein said at least one predetermined parameter allows a device to recognize a file on the record carrier without understanding content of the file and to ignore the file having the one format.

However, Heo teaches the record carrier is partitioned into at least a first partition for including first content of a first type and second partition for including second content of a second type so that a first access device accesses the first content and a second access device accesses the second content, the first type being different from the second type (col. 1, line 56 –

col. 2, line 5—the record carrier is partitioned into an audio CD partition {or session} and a CD-ROM partition; these are two content types, each of which is accessed by a different access device).

All of these claimed elements were known in Acker and Heo and could have been combined by known methods with no change in their respective functions. It therefore would have been obvious to a person of ordinary skill in the art at the time of invention to combine the at least two partitions of Heo with the record carrier of Acker to yield the predictable result of a record carrier which is partitioned into at least a first partition for including first content of a first type and second partition for including second content of a second type so that a first access device accesses the first content and a second access device accesses the second content, the first type being different from the second type. One would be motivated to make this combination for the purpose of allowing the use of the record carrier on both new and legacy devices by providing data in formats supported by each device.

Acker/Heo does not teach that space is dynamically moved between the first partition and the second partition, and wherein said at least one predetermined parameter allows a device to recognize a file on the record carrier without understanding content of the file and to ignore the file having the one format; and wherein the record carrier is subdivided into fragments and said at least one predetermined parameter comprises a partition descriptor information (PD) for specifying a fragment allocation to define a not necessarily contiguous space associated with the partition. However, Abboud teaches that space is dynamically moved between the first partition and the second partition (col. 7, line 37 – col. 8, line 3—space is dynamically moved between the NOS partition and the float partition).

All of these claimed elements were known in Acker/Heo and Abboud and could have been combined by known methods with no change in their respective functions. It therefore would have been obvious to a person of ordinary skill in the art at the time of invention to combine the dynamic partitioning of Abboud with the record carrier of Acker/Heo to yield the predictable result of a record carrier in which space is dynamically moved between the first partition and the second partition. One would be motivated to make this combination to make efficient use of the limited space of the record carrier.

Acker/Heo/Abboud does not teach said at least one predetermined parameter allows a device to recognize a file on the record carrier without understanding content of the file and to ignore the file having the one format without making an attempt to interpret the file having the one format; and wherein the record carrier is subdivided into fragments and said at least one predetermined parameter comprises a partition descriptor information (PD) for specifying a fragment allocation to define a not necessarily contiguous space associated with the partition.

However, Puri teaches at least one predetermined parameter allows a device to recognize a file on the record carrier without understanding content of the file and to ignore the file having the one format without making an attempt to interpret the file having the one format (fig. 4, steps 416 and 418, and fig. 3, step 325; col. 9, lines 13-25—all files are recognized, regardless of the format. In the described flow, in step 416, the filename extension is first checked to determine if the file is understood. If not {i.e. if the extension is not a Wordperfect extension}, in step 418 the Windows Registry is checked to determine the file type. If the file type is registered as a type other than Wordperfect {i.e. the file has one format of multiple formats, the content of which is

not understood}, it is ignored; the flow goes to step 325 of fig. 3, which terminates the process and performs no further processing on the file).

All of these claimed elements were known in Acker/Heo/Abboud and Puri and could have been combined by known methods with no change in their respective functions. It therefore would have been obvious to a person of ordinary skill in the art at the time of invention to combine the recognizing and ignoring files of Puri with the record carrier of Acker/Heo/Abboud to yield the predictable result of a record carrier wherein said at least one predetermined parameter allows a device to recognize a file on the record carrier without understanding content of the file and to ignore the file having the one format without making an attempt to interpret the file having the one format. One would be motivated to make this combination for the purpose of maintaining the recorded file structure while avoiding errors by not attempting to interpret a file of an unknown format.

Acker/Heo/Abboud/Puri does not specifically teach the record carrier is subdivided into fragments and said at least one predetermined parameter comprises a partition descriptor information (PD) for specifying a fragment allocation to define a not necessarily contiguous space associated with the partition. However, Basham teaches a record carrier that is subdivided into fragments and a predetermined parameter that comprises a partition descriptor information (PD) for specifying a fragment allocation to define a not necessarily contiguous space associated with the partition (col. 3, lines 30-34 describes variable-size partitions composed of segments {i.e. fragments}; col. 3, lines 62-67 explains that the partitions may be composed of non-contiguous fragments. Col. 11, line 57 - col. 12, line 9 describes the parameter used to specify the fragment allocation to partitions).

All of the claimed elements were thus known in Acker/Heo/Abboud/Puri and Basham and could have been combined by known methods with no change in their respective functions. It therefore would have been obvious to a person of ordinary skill in the art at the time of invention to combine the partitions composed of non-contiguous fragments of Basham with the record carrier of Acker/Heo/Abboud/Puri to yield the predictable result of having the record carrier be subdivided into fragments and said at least one predetermined parameter comprises a partition descriptor information (PD) for specifying a fragment allocation to define a not necessarily contiguous space associated with the partition. One would be motivated to make this combination for the purpose of further increasing the flexibility of the storage format (Basham, col. 4, lines 48-55).

Regarding Claim 22, Acker teaches said navigation area is arranged in a lead in area of said information area (¶ [0004], lines 16-27, as for Claim 21, above).

Regarding Claim 23, Acker teaches sessions provided in said information area are written without separate lead-in and lead-out area (fig. 19; ¶ [0176]—only the first session has a lead-in area, and only the last session has a lead-out area).

Regarding Claim 24, Acker teaches sessions provided in said information area have a granularity of one fragment (¶ [0038] and fig. 12, ¶ [0121]-[0126]—a fragment can be defined as any number of ECC blocks according to the present disclosure; the Session Map Block shown and described here can be considered a fragment, and sets the granularity of a session).

13. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Acker (U.S. 2002/0181376) in view of Heo (U.S. Patent 6,901,210) in view of Abboud (U.S. Patent

6,636,958) in view of Puri (U.S. Patent 6,260,043) in view of Basham (U.S. Patent 5,757,57), as applied to Claim 21, above, and further in view of Horie (U.S. 2002/0064111).

Regarding Claim 25, Acker/Heo/Abboud/Puri/Basham teaches sessions provided in said information area have a varying physical location (it is inherent that each session be recorded in a different physical location on the record carrier), but does not teach that sessions have varying size. However, Horie teaches that sessions have varying size (fig. 14, step M8; ¶ [0276]—since the device needs to determine the size of the session, sessions can clearly have varying size).

All of the claimed elements were known in Acker/Heo/Abboud/Puri/Basham and Horie and could have been combined by known methods with no change in their respective functions. It therefore would have been obvious to a person of ordinary skill in the art at the time of invention to combine sessions of varying size of Horie with the record carrier of Acker/Heo/Abboud/Puri/Basham to yield the predictable result of a record carrier wherein sessions provided in said information area have at least one of a varying size and a varying physical location.

14. Claims 27 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heo (U.S. Patent 6,901,210) in view of Ballantyne (U.S. Patent 6,693,869) in view of Abboud (U.S. Patent 6,636,958) in view of Puri (U.S. Patent 6,260,043) in view of Basham (U.S. Patent 5,757,57), as applied to Claims 1 and 26, above, and further in view of Lofgren et al. (U.S. Patent 6,081,447, hereafter "Lofgren").

Regarding Claims 27 and 31, Heo/Ballantyne/Abboud/Puri/Basham does not teach at least one predetermined parameter further specifies an allocation history of volatile files and,

based on the history, said access means being further configured to re-allocate volatile files if written as many times as half an expected recyclability of the record carrier. However, Lofgren teaches an allocation history of volatile files and, based on the history, said access means being further configured to re-allocate volatile files if written as many times as half an expected recyclability of the record carrier (col. 4, lines 18-24 shows keeping an allocation history of volatile files. Col. 5, lines 25-30 shows relocating volatile files. Col. 5, lines 48-62 explains the limitations placed on when the reallocation of volatile files {wear leveling} should occur; this is detailed in col. 7, lines 51-61, which describes using the history and waiting a large number of rewrite cycles {the exact number is an adjustable parameter} before performing reallocation in order to maximize the life of the recording medium).

All of the claimed elements were known in Heo/Ballantyne/Abboud/Puri/Basham and Lofgren and could have been combined by known methods with no change in their respective functions. It therefore would have been obvious to a person of ordinary skill in the art at the time of invention to combine the reallocation of volatile files to maximize media life of Lofgren with the navigation area and parameters of Heo/Ballantyne/Abboud/Puri/Basham to yield the predictable result of having at least one predetermined parameter further specify an allocation history of volatile files and, based on the history, said access means being further configured to re-allocate volatile files if written as many times as half an expected recyclability of the record carrier.

15. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Acker (U.S. 2002/0181376) in view of Heo (U.S. Patent 6,901,210) in view of Abboud (U.S. Patent

6,636,958) in view of Puri (U.S. Patent 6,260,043) in view of Basham (U.S. Patent 5,757,57), as applied to Claim 21, above, and further in view of Lofgren (U.S. Patent 6,081,447).

Regarding Claim 29, Acker/Heo/Abboud/Puri/Basham does not teach at least one predetermined parameter further specifies an allocation history of volatile files. However, Lofgren teaches at least one predetermined parameter further specifies an allocation history of volatile files (col. 4, lines 18-24).

All of the claimed elements were known in Acker/Heo/Abboud/Puri/Basham and Lofgren and could have been combined by known methods with no change in their respective functions. It therefore would have been obvious to a person of ordinary skill in the art at the time of invention to combine the reallocation of volatile files to maximize media life of Lofgren with the navigation area and parameters of Acker/Heo/Abboud/Puri/Basham to yield the predictable result of having at least one predetermined parameter further specify an allocation history of volatile files.

Response to Arguments

16. The amendments to Claims 1, 21, and 26 are accepted as overcoming the rejections under 35 U.S.C. 112, first paragraph of the previous office action, mailed 13 August 2009; these rejections are hereby withdrawn. Although the amendments also overcome the previous rejections under 35 U.S.C. 112, second paragraph, they introduce new issues that necessitate new rejections under 35 U.S.C. 112, second paragraph, as detailed above.

17. Applicant's arguments with respect to Claims 1-13, 15-29, and 31 have been considered but are moot in view of the new ground(s) of rejection. Although the prior art previously of

record does not specifically teach wherein the record carrier is subdivided into fragments and said at least one predetermined parameter comprises a partition descriptor information (PD) for specifying a fragment allocation to define a not necessarily contiguous space associated with the partition, as recited by amended Claims 1, 21, and 26, new prior art reference Basham teaches this limitation, as detailed above.

The examiner also notes that the new limitation as claimed is not as specific as the applicant describes in the remarks. Pages 12-13 of the remarks, for example, state "More particularly, the invention allows extending the partitions by modifying the allocation of fragments. Advantageously, a flexible size and interleaved partitions are accommodated, while at the same time each partition has its respective, different data format." However, the present claims make no mention of modifying an allocation of fragments. The present claims are also not explicit about the relationship between types of content and formats of the partitions; they state that the first partition includes content of a first type and the second partition includes content of a second type, and further state that the record carrier includes multiple formats, but there is little connection among formats, content types, and partitions, nor are these explicitly connected to fragment allocation.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. This art includes Fuller (U.S. Patent 6,032,161), which teaches a system that creates a "raw file" that is formatted and used as a partition and may be non-contiguous.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HAL SCHNEE whose telephone number is (571)270-1918. The examiner can normally be reached on Monday-Friday 8:00 a.m. to 4:30 p.m. E.S.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew M. Kim can be reached on (571) 272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matt Kim/
Supervisory Patent Examiner, Art Unit 2186

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